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# Natural forms in clay

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A Thesis Submitted to the Faculty of  
The College of Fine and Applied Arts  
in Candidacy for the Degree of  
MASTER OF FINE ARTS

NATURAL FORMS IN CLAY

By

Karen Tretiak

One - May \_ 1977

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## Thesis Proposal

The purpose of this thesis is to explore hand-built sculptural forms with the primary technique of coiling. The major area of work will be in developing structures that are reminiscent of designs found in nature. These pieces will be fired by a variety of methods using the texture and color of the clay body and the actual firing process as a surface treatment. I will attempt to find a level of unification of these firing methods and the forms I will create.

Creativity is an ongoing process of understanding one's experiences and growing with them. For me, this experience is very heavily weighted on the visual side of the scale. To take what I have observed and create a bond between it and myself. Through some sense of understanding, memory, love, humor I make the attempt to breathe myself into these forms. To achieve this harmony I have strived to develop two aspects of myself as the artist. First, myself as the observer. To learn to see, interpret, acknowledge the patterns, lines and forms I see in nature. I've spent long hours walking and looking to better understand what my eyes have passed over, even taken for granted for a long time. Learning to see is the basis for creating any art form that is a visual interpretation. Before the artist can manipulate the idea, the structure must be clear in his eye. He must possess a storehouse of visual information to draw from in making his creative statement.

The other aspect of training involved myself as the technician. The craftsman who could have the freedom of understanding the perimeters of the chosen media. Many of the structures I chose to work with were difficult to achieve in clay. Size, gravity and stress often worked against the limits of the clay. To surmount these obstacles, much time was spent on different types of construction. Merely learning to join one piece of clay to another to survive the fire was a major

forward step for the larger structures, yet in such a way that would not sacrifice spontaneity for strength. My goal as a carpenter in clay was to find a balance between the two.

"Our subject concerns the visual patterns and forms in the natural world. It turns out that those patterns and forms are peculiarly restricted, that the immense variety that nature creates emerges from the working and reworking of only a few formal themes. Those limitations on nature bring harmony and beauty to the natural world."<sup>1</sup>

This morning I walked out through the woods and fields behind my house. I found a vast collection of different forms, textures, linear designs and structures. Tiny environments overlapping, sharing common space and time, living and dying together. Out of destruction by plants, animals and weather I saw new organisms begin to grow.

My initial theme for this body of research and exploration dealt with organic structures as realized in clay. I thought at the beginning that I would deal with a variety of unrelated forms to cover as broad a spectrum as possible. As I began to see these forms and ideas more clearly, I realized it was not the contrast of different constructs I must deal with but the union of them. Balance, the interrelation of forms in nature as represented as forms in clay. It became impossible to observe specific patterns in each piece without being aware of a much larger plan. To look at a species honestly and clearly I could not isolate it from its environment.



I found myself always considering what had come before to create this form and what would follow in its place. Although my main concern with the clay centered on the visual patterns that recurred I began to see this broader, more abstract theme repeated in my work.

I've condensed the idea to three basic concepts in clay that are representative of parts of this cyclical balance. Trees, rock formation and seedpods. Words that represent stages of growth. Points in time and space; images of ideas that span a larger spectrum of growth, life and decay. I've chosen these specific concepts because they encompass a variety of feelings and structures that give me the freedom to explore different images in clay while retaining an overall cohesion to the body of work.

### Trees

As in all of my pieces there is a great change from the initial concept to the final forms in a series. The tree forms were no exception. The initial idea was not very concrete and dealt mainly with a general upward momentum in the structure to convey a feeling of growth and height.

"Movement that flows at the same time around and upward with no real beginning and no apparent conclusion. Power --- and strength in size and energy . . . yet delicacy in detail."<sup>2</sup>

The first group of forms emerged very tied to the ground, lacking this uplifting quality. I felt I needed a solution



to the flatness of the base to achieve this. In the next series I built the bases over undulating molds to free the structure and allow more movement under as well as around the piece. I also began dealing more boldly with the coils themselves to create a greater rhythm in line around the form thus increasing the energy around the sculpture. I saw that by contrasting the width of the coils I could exaggerate the bulges and constricted areas. This also added to the feeling of upward growth.

Another important depictive device that I discovered in this series was the use of very thin coils and tiny, plate-like discs at the top of the form. I was striving to define the leafy quality of a tree. The soft, delicate, even crowded appearance of the leaves. That quiet statement found at the outer reaches of the tree and in the gentle whispering of the branches.

"The smallest veins at the top of the tree are gathered into protective sheaths or leaves that flatten out so as to expose large surfaces to the sun."<sup>3</sup>

At this stage in the evolution of this particular form I began to reassess what I had been looking at. I took myself away from the studio situation and back to the growing plants. I looked again more closely at trees. I touched them, watched them, drew them. I read about growth in trees, nourishment, meristems. Constantly going back to the tree



Plate I. Tree Formation  
Salt Fired Stoneware





Plate II. Tree Formation, Detail  
Salt Fired Stoneware

itself with brush and paper, to observe and record.

"The tree cannot put out new growth at any point it chooses, it can grow only at meristems that have been specifically prepared in advance. Meristemic growth, growth at only a few points, has developed in trees because new tissue is so delicate that it cannot support itself physically; it must be supported by tough parts that have already grown."<sup>4</sup>

"Each part, although different from the others, branches so that little pieces are added around the periphery to big ones in the center . . . that is the one directive that has survived countless evolutionary changes and modifications."<sup>5</sup>

The final group in this series grew very rapidly and freely. The full force of what I had been observing came to light in these pieces. I built them together in the same position and attitude that the finished, fired pieces would hold. Throughout the construction of these tree forms I was aware of the full scope of emotions and visual pictures that living trees evoked in me. I worked to have the clay reflect the strength of this plant. Forever tied to the earth, yet continually growing upwards; the spiraling movement of form upon form. The firm beginning of a life rooted to the ground yet able to build to the sky. The delicate, leafy denouement at the top.

As I viewed the completed group I became aware of how important the drawing I had done was to the finished pieces. The relationship of the drawn line to the line depicted by the coil is very strong. The feeling of line upon line, layered



over each other to describe a form. And most important, the feeling of gesture. In the drawings I began to feel attitudes, almost personalities, emerging from the directions of growth of the limbs and branches. The most abstract of all the feelings I experienced was this sense of communication among the trees in a forest. A line from my sketchbook: "That feeling I always get when walking through the woods that everything is still because I am there. As if I have invaded some private sanctum. When I leave the trees will resume their quiet whisperings and communication with the forest."

I felt this come across most strongly in this final grouping. At every constriction of the form the tree bends slightly in a new direction. For most of the piece this is intended to strengthen the feeling of inner energy and upward movement. But at a certain point near the top the form makes a definitive bend in one direction that is maintained throughout the rest of the top portion. When viewed together, this causes the upper part of the forms to bend toward each other in a conversational gesture. They seem to be gently nodding towards each other, listening for the quiet whispering of leaves and wind.

The tree in its own natural environment serves an important contribution to the balance of life. I choose to represent the mature tree, symbol of a life-force at its peak. To help maintain the equilibrium in its surroundings the tree has taken on a variety of roles. As fertile bearer of new shoots it



Plate III. Tree Formation  
Salt Fired Stoneware





Plate IV. Tree Formation, Grouping  
Salt Fired Stoneware

propagates the species which at the same time creates an undergrowth for small plants and animals to live in. The tree is also a provider of food for animals and man, sending out leaves, buds and sometimes fruits at its perimeters. The protective aspect of a tree provides shelter for smaller creatures from weather and predators. Birds, squirrels and other genus find homes and safety in its branches.

"Leaves of vine and big leaf maples, the latter as much as a foot across, catch soft white light coming through spruce and fir and transform it into a rich yellow-green . . . Thick layers of vegetation cover the forest floor and downed trees, and become seed beds for other life."<sup>6</sup>

### Seedpods

In contrast to the physical strength and power of the trees, I sought to find a representation of a more delicate and tenuous member of a woodland environment. Something to depict the uncertainty and instability of this fragile balance. The variety of new growth in a forest is infinite and I was searching for a common beginning. I investigated saplings and buds, young plants of many varieties, but discarded each idea as being too firmly established in the environment. These were all already surviving and flourishing in their world. I went back even further to the very beginning of life: the seed. As I read and observed I learned that every plant has devised a protective womb for the seed to ripen and grow in until it's ready to be cast out. There are myriad shapes

and designs that nature has devised for this purpose, but they all have a few universal characteristics. The seedpods have been built to protect the growing seed as a closed container that can expand and stretch as the seeds grow. Most pods contain many seeds packed tightly together in some type of layered or stacked pattern. Each type also has a device for releasing and scattering the seeds on the forest floor. Most often the seedpod will burst at the top or in lines down the side of the form. This allows the particles inside to be ejected into the wind which carries them to the soil.

"Their color changes from green to pale-yellow or brownish-yellow, the walls become hard and dry; then finally the fruit opens at the top, the seams burst and the walls fall apart."<sup>7</sup>

"The fruits of the bell-flower stand upright on their stems, or they may droop; each species has its own type. When the seeds are ripe, three small holes appear in the walls of the seedcase to prepare a way for the seeds to escape into the world. These holes are so located that the seeds will not fall close to the parent plant, but will be thrown some distance when autumn winds shake the stems."<sup>8</sup>

I experimented with several types of forms in the first series of this image. I was drawn again and again to a slender graceful pod that I would vary slightly from form to form. These were gentle, tapered shapes that bulged slightly in different areas and concluded in a narrow opening at the top. Unlike the tree forms, these pieces were not meant to seem solidly anchored to the ground. Instead I was looking for an airy, swaying quality that would uplift the forms. To achieve





Plate V. Seedpod  
Salt Fired Stoneware

this feeling I experimented with various rounded bases, intending later to insert the finished pieces in some other media. The seedpods differed from the tree forms in the use of the coils as well. In the trees the coils are purposely left exposed to allow a linear movement and rhythm on the surface. In the pod shapes I did not want the silhouette to be broken by any irregularity of the surface. I wanted a smooth, clean line up the side of the form. The coils were smoothed and paddled as I worked, to create an even, uninterrupted surface. The most difficult task I encountered in this first series was a solution for the seeds themselves. I did not want to represent the actual seeds, rather some feeling of bursting forth from the interior of the form. After several different attempts, I decided to use small coils emerging from the mouth of the form that gave the illusion of spilling down over the sides of the pod. By varying the size and number of coils, I could depict the seedcase at various stages of maturity..

I began the second full group of seedpods as a series of six forms. As with the trees, I built them simultaneously to relate them back and forth to each other as they were progressing. To define the small, rounded base I cast plaster molds of clay forms that I had built to a specified diameter. The molds served not only as a device to determine the shape but as a stable container that would hold the form upright during construction and drying. I also cut quarter inch holes at the

very center of the end point of the clay pods. Later, steel rods would be inserted through these holes and anchored to a base.

This series of seedpods are much taller and narrower than the original idea. The bulges in the pods are more subtle with slight variances from form to form. As singular pieces they are strong, graceful, quiet statements. As one unit, viewed together, they represent the vulnerable threshold of a new life cycle. The finished pieces were set onto metal rods which were in turn embedded in concrete pads. Each pad had a separate base so they could be arranged in different formations. A layer of loose sand was poured over the bases, up to the beginning of the clay pod. This produced the effect of the forms growing out of the sand.

Upon standing back and viewing the forms in their completed position:

"The seedcases retain the pale-yellow color of the flowers during the summer, but become darker in autumn. The pistils with their flattened stigmas, project above the fruits, giving them the appearance of narrow-necked vases, or old-fashioned decanters."<sup>9</sup>

The number of seeds that reach maturity, relative to those that perish at an early stage, is minimal. Yet this is only an illusion of waste. These seeds, kernels of grains, nuts and legumes serve to nourish other life forms. A sacrifice for the survival of another species. These clay forms represent the





Plate VI. Seedpods, Grouping  
Salt Fired Stoneware

fragile, unsure fate of a new life. For this reason I purposely erected the form on a very unstable visual base. The clay pods swell out from a tiny point that seems precariously unable to sustain the height and weight of the piece. It is only this small area that ties the form to the ground until the seeds are ripe and the pod is discarded. A brief life-span that serves an important function in the cycle of the environment. Seen in a group, with these narrow foundations, they seem to be swaying in the wind, their direction determined by stronger forces in nature. The representation of the seeds within the pods is also a tenuous question in the evolution of a plant. The coils that are emerging from within the form vary from piece to piece. Some have completely opened the top of the form, spilling out and down the walls in their haste. Others are just barely beginning to emerge from the case; small, uncertain coils that are still partially trapped within the pod. The size and proportion of the different seedpods is important to this overall representation also. The stronger more durable ones have reached a greater height with strong, definite walls. They appear to be the dominant member of their community, already releasing many seeds. Other, smaller seedpods have not attained this strength and sense of completion, but are a more irregular form, putting out a few tentative seeds.

The grouping, as one unit, represents an important contrast to the stability and role of the tree in the woodland. Fragile,





Plate VII. Seedpod  
Salt Fired Stoneware

easily destroyed, the seedpod is a thin thread that links this life-style together. Unlike the tree that serves a multitude of purposes, the seedpods of any plant only serve to protect the seedlings until ripened. Once this task is completed, the discarded shell will become part of the forest floor.

### Rock Formation

As I have stated throughout this investigation, these pieces are representative ideas of much broader concepts in nature. The tree forms are not maples or redwoods or fir, per se, but encompass a variety of characteristics that make this species different from any other. Along this line of thinking and through my observations, the idea for a third type of form began to emerge. I wanted to depict an element within an environment that was less fragile and closely tied to an organic life-cycle process. At the same time I needed a type of form that would free me from the tightness I was feeling with the clay after completing the seedpods. My solution to this criteria was the rock formations.

"Sedimentary rock, as the name implies, has formed from layers of accumulated sediment. Some consist of the consolidated accumulation of material derived from the debris of already existing rocks as a result of various breakdown processes. Others may result from an accumulation of debris derived from organic material -- the remains of plant and animal life."<sup>10</sup>

This was the type of rock I wished to convey: the sedimentary rock. It contained the essence of what I wanted



to portray; strength, power and a foreboding presence. Standing in one place for hundreds of years while other life forms completed many cycles of evolution. The sedimentary rocks I looked at most closely were the huge monoliths of Moab Deadhouse, Utah. Great slabs of rock layered upon one another to immense heights. These are some of the most beautiful of nature's sculptures: rough, jagged silhouettes that dominate the sparse landscape. These particular sedimentary rocks are most beautiful at sunset, bathed in a burning red hue. It was this visual picture that influenced the clay structures I would build.

The first sketches I made in clay were small coiled boxes. I began with scaled-down representations so that I could experiment more quickly with the coils and the clay body. I wanted a loose, spontaneous character in the coils, a direct contrast to the controlled use of the coils in the tree forms. In this first series of earthenware boxes, I did not achieve that rough, uneven surface that my mind could picture. Nor did I succeed in varying the type of coil I was forming to the extent that I needed to create this free, uncontrived attitude in the pieces. I was still using my paddle too carefully and with excessive control on the surface of each coil. From this first group there were also some positive conclusions. The most important being the success of the earthenware clay body to depict this particular rock strata. The orange-red color of the clay when



Plate VIII. Box  
Sawdust Fired Earthenware





Plate IX. Box.  
Sawdust Fired Earthenware



Plate X. Box  
Salt Fired Stoneware





Plate XI. Box  
Salt Fired Stoneware

combined with the carbon-black of the sawdust firing creates a very primitive image. In this first series of sketches, I also began squaring the corners of the forms. In contrast to the rounded spheres of the tree forms, this helped add to a jagged, craggy attitude in the earthenware pieces.

With the information derived from these preliminary sketches, I decided to begin a larger piece. As I could not view these sedimentary rocks at first hand (the trees and seedpods were easily accessible models to work from) I relied more heavily on photographs and sketches I had made from these. In this next piece I worked consciously for size and spontaneity. The coils became much larger in the main body of the form and were purposely left unpaddled in many areas. The top of the piece was defined with smaller coils that formed irregular shapes that folded back upon themselves. The finished piece consists of two rock forms that are viewed side by side, with one slightly smaller than the other. The Utah rock formations often appear in groups of two or more, casting shadows upon each other and creating negative spaces between them. I sought to convey this feeling by grouping these two pieces together. This sculpture begins to reflect the feelings of immovable presence and vast years of existence that are apparent in the original rock. Particularly because of the clay body and firing technique, these forms appear to have weathered centuries of changes around them. They themselves





Plate XII. " Bristol Rock "  
Sawdust Fired Earthenware

have altered very little, guarding the terrain where they stand.

"it looks as though nature had ripped these peaks from their moorings, thrust them above 13,000 feet and then stopped. The mountains are so solid, the changes so hard to detect, that man might call them eternal."<sup>11</sup>

The final piece that evolved from this theme combined the energy of movement within a plane with the simplicity of a basic geometric shape. The form was designed as a simple box-like structure with four walls, a top and open at the bottom. However, the nature of the coils themselves alter the rigid sense of such a structure. In this piece, more than any other, the definition of coil has become very broad, taking on many varied meanings. The coils range from paper-thin sheets of clay to thick slabs seven to eight inches in height. They are attached by being thrown on top of each other, bending and cracking with the natural stress of the clay. As the piece grew I realized the impermanent nature of such a structure when exposed to the fire. But I could not sacrifice the unrefined personality of this form to enhance its permanence. The coils were attached very securely inside the piece and I felt this would sufficiently counter the weight of the structure.

The fired piece reflects a spontaneous handling of the clay in the jagged rock-like silhouette. It seems to call to mind the sun-bathed rocks of Moab Deadhouse, Utah. There is





Plate XIII. " Every Species Has Its Own Origin "  
Sawdust Fired Earthenware

an energy within this piece which surpasses many of the earlier forms. It seems almost to have broken off from the original rock and is linked still to that source.

### Firing Methods

The firing techniques for the various types of forms depended on the character of the piece. It was important that the firing create a surface that was homogeneous with the sculpture and enhanced the concept of tree or seedpod or rock formation. For this reason I concerned myself primarily with the effects of the fire directly on the piece, void of any glazes or slips. I looked for a control of the surface through the atmosphere in a kiln and therefore the type of fire that the piece was subject to.

In the tree forms I needed a surface that would coincide with the flowing coils and sensuous curves of the pieces. I wanted an overall surface with subtle variations that would not conflict with the linear sense of the coils. I experimented with the preliminary sketches in wood, salt and sawdust techniques. I felt the salt method enhanced the forms more successfully than the others and gave me a wide range of color variation within a green to grey-green palette. The salt itself creates the luscious orange-peel effect that suits the rounded elements of the form. It also produced the visual effect of bringing out the lines of the coils in darker hues



than the rest of the piece. I found that in experimenting with the reduction time and a light stoneware body I could produce a subtle greenish tint to the surface. This reflected the lush green of a forest during the height of the growing season. At the same time, due to the nature of salt-firing, I could produce a variety of subtle variations of this tint within the same kiln. This could be determined by stacking patterns and where the pieces were placed within the kiln. For the tree forms salt-firing provided a strong overall visual cohesiveness that at the same time promoted the sensuous feeling of these natural forms.

Since the seedpods were meant to be viewed together I wanted a firing technique that would create a statement on the surface with little variation from piece to piece. Salt-firing experimentation with these forms produced such a unified feeling when they were fired in an atmosphere that was heavily influenced by soda. By using a mixture of three parts salt to two parts soda, I could create a more subdued surface. I also increased the period of reduction in firing the seedpods. This produced a much browner color to the surface which I felt supported the concept of the seedpods. In most of the seed-cases, I observed that they would turn to shades of brown when the seeds were ripe and ready to leave the pod.

In firing the rock formation, I felt the forms were more primitive and raw and needed a technique that promoted this idea.



From the beginning of this concept, I had the intention of sawdust firing these pieces. The rock formations were purposely built of a red earthenware body that would easily take this type of firing. Throughout the construction of these pieces, the initial image of a desert-like atmosphere prevailed. In accordance with this I needed a firing process that said burned and charred by the sun. The contrast between the red earthenware and the black of the combusted sawdust enhanced this illusion. The clay forms were fired to cone 08 in the bisque and then fired in a sawdust kiln. The larger rock formations in this series were fired on their sides because of the size limitations of the kiln. This produced interesting flashing from the walls and floor of the kiln. The finished effect was a surface that ranged from the red-orange of the bisqued clay to subtle greys and intense blacks. The burning sawdust collected in the recesses of the slabs and coils creating intense lines across the form. The dry, scorched effect of the sawdust firing helped to articulate the rock formation statement.

There can be no definite conclusion to this body of work, but only a resting point. The observation and experimentation I have done has brought these clay forms to a certain state of resolution. As the finished pieces reflect a particular point in time, in the development of a life form, so do they represent an isolated piece of my own development. Every form

that I have created has served two roles in its existence: a completed image of a certain idea or feeling, and the inspiration for new ideas, changes, concepts. As I experience more, so too will my clay expression grow to reflect this.

In these finished pieces I see this idea very clearly. The tree forms I can envision in connected forms that create labyrinths of tunnels and walkways between them. Perhaps the actual idea of tree will disappear and the forms will take on other connotations. In all of these pieces, I used the initial concept as a visual stimulus from which I could observe natural form and design patterns. In future works I can be free to grow from these restrictions into forms that have no concrete origins. The sculptures in this thesis have provided me with a solid vocabulary of forms in clay that will allow me a broader framework in the future. They have also given me the discipline to observe more sensitively and interpret more accurately the visual information around me. I can now temper my dreams and illusions with a more tangible understanding of form and order in nature.

"A child said 'What is the grass?' fetching it to me with full hands;

How could I answer the child? I do not know what it is any more than he."<sup>12</sup>

Footnotes

- <sup>1</sup> Peter S. Stevens, Patterns In Nature (Boston-Toronto: Little, Brown and Company, 1974), p. 3.
- <sup>2</sup> lines from my sketchbook, Karen Tretiak.
- <sup>3</sup> Peter S. Stevens, Patterns In Nature (Boston-Toronto: Little, Brown and Company, 1974), p. 139.
- <sup>4</sup> Ibid., p. 116.
- <sup>5</sup> Ibid., p. 139.
- <sup>6</sup> Milton Rugoff and Ann Guilfoyle, commentary by Ann and Myron Sutton, The Wild Places (New York: Harper and Row, Publishers, 1972), picture #21.
- <sup>7</sup> Bertel Bager, Nature As Designer (New York: Van Nostrand Reinhold Company, 1966), p. 140.
- <sup>8</sup> Ibid., p. 88.
- <sup>9</sup> Ibid., p. 40.
- <sup>10</sup> Brian Simpson, Minerals and Rocks (New York: Galahad Books, 1974), p. 58.
- <sup>11</sup> Milton Rugoff and Ann Guilfoyle, commentary by Ann and Myron Sutton, The Wild Places (New York: Harper and Row, Publishers, 1972), picture #43.
- <sup>12</sup> Oscar Williams, editor, Modern Verse (New York: Washington Square Press, Inc., 1964), Walt Whitman, Grass, p. 24.



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